The significance of looking back: fertility before the "fertility decline"

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The Significance of Looking Back: Fertility before the "Fertility Decline"[1]

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Abstract: *»Die Bedeutung des Blicks zurück in die Geschichte: Fertilität vor dem "Geburtenrückgang"«.* In this paper, I argue that living with no or few children and low fertility was widespread in pre-industrial societies. After a critical discussion of demographic transition theory and the concept of "natural fertility", I investigate fertility in early modern Europe. In doing so, I follow the suggestion of "cultural demography" and combine quantitative and qualitative research. I show a great extent and many variations of deliberate birth control before the "fertility decline" took place. This finding should help to see the actual level of fertility as less exceptional and dramatic than it is often claimed.

Keywords: fertility, birth control, early modern period, Europe, Japan, demographic transition theory.

1. Introduction: The Benefit of a Long Historical Perspective

For quite a long time, the prevailing assumption was that there exists a clear dividing line between pre-modern reproductive behavior (with a high number of births) and modern limitation of fertility. Classic manifestations of this point of view are the theories of "demographic transition" and "natural fertility" discussed in greater detail below. Nevertheless, recent research has called into question such dichotomic conceptions. A study of history does not reveal two clear, discrete, homogeneous patterns; instead, human reproduction exhibits a high degree of variability and plasticity. These changing paradigms have given new significance to a long historical perspective on human reproduction. This paper argues that looking back in history makes it easier for us to understand the diversity of fertility, the complexity of its determinants, and to assess cur-

[1] As indicated in the Editorial, the papers in this special volume are the outgrowth of a conference that was organized by a multidisciplinary working group on the subject of fertility. Accordingly, my chapter is not primarily intended for specialists in historical demography or population history, but rather social scientists, biologists, medical scientists and scholars in other disciplines who are doing research on fertility. At the same time, I also hope to contribute to the advancement of this discussion among historians. I would like to express my gratitude to Mel Greenwald for his help with the English version of this paper.

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rent demographic facts and circumstances. It also shields us from the assumption that current circumstances are immutable over the long term, or that future changes in fertility can proceed in one possible direction only – that is, towards further limitation and reduction. From this perspective, the development of human reproduction has been diverse and variable, and its future is open.

The benefit of a long historical perspective concerns, in principle, all historical periods.[2] Investigations of human fertility have not been limited to the Modern Age – neither on the individual level nor on the level of entire societies and countries. Anthropological as well as historical studies on the reproductive behavior of peoples of various stages of development have greatly enriched empirical evidence and theoretical reflection. In sum, they show an enormous degree of temporal variation as well as of regional, social and cultural differentiation. Moreover, they indicate that in numerous historical societies and cultures, individual women, men and couples have repeatedly sought to influence their reproduction, both to assure having offspring or to increase their numbers, or, conversely, to avoid procreation or to keep the number of their children low. Of course there are differences among historical epochs and the manifold cultures of our world – with respect to the intentions that human beings pursue; the methods they utilize to promote or prevent pregnancies and births; the effectiveness of these methods; and finally with respect to the statistically quantifiable results of the reproductive behavior of large populations. However, both historical and global comparisons also make it possible to clearly bring out the relativity of the respective current circumstances.

Of course, all historical forms of human reproduction are of interest to us; nevertheless, the so-called early modern period (roughly from the 16th to the 18th century) assumes particular significance. Intensive historical-demographic research on precisely this period has established itself in Europe since the 1950s (Flinn 1981, 1-12). It is based, firstly, on the quantitative evaluation of church registers that have recorded baptisms, marriages and deaths in individual parishes since the 16th and 17th centuries. These data allow scholars to reconstruct reproductive histories of individuals and single families, as well as making it possible to summarize the results and establish groups that differ from one another with respect to social, cultural or regional factors. Secondly, reproductive behavior in the early modern period has also been the subject of cultural historical research (McLaren 1984). The issues of sexuality and reproduction were, in this period, the focus of intensive discourses in religion, philosophy and medicine as well as in jurisprudence, the arts and literature. Furthermore, numerous so-called “ego-documents” such as letters, diaries and the like have come down to us; in them, individual men and woman expressed their views about sexuality, reproduction and contraception. Those who have their

[2] For a recent population history of Europe which covers all historical periods see Bardet and Dupâquier (1997-1999).

say in such compositions are predominantly members of the upper classes. Statements on this subject by men and women of the lower classes, on the other hand, come to us primarily from court records having to do with illegitimate forms of sexuality. Sources of this kind make it possible to reconstruct attitudes about children, what motivated people to reproduce or avoid doing so, and the practices utilized to accomplish their respective aims.

Such cultural-historical approaches were, of course, also developed for later historical phases. They play an increasingly important role for the analysis of the "First Fertility Decline" and the variations of fertility over the 20th century (Gillis, Tilly, and Levine 1992; Szreter 1996). In my opinion, though, what has occurred in the field of demographic analysis of the early modern period is a dialog between quantitative-statistical and cultural-historical approaches to a significantly greater extent than in scholarly research on other historical periods. New methodological approaches to explaining historical fertility trends and variations have been discussed in the field of international historical demography ever since the 1980s. These approaches have been designated as "cultural demography" or "anthropological demography" (Kertzer and Fricke 1997; Greenhalgh 1995). They aim to achieve greater integration of quantitative demography, cultural history and historical anthropology. In research on the early modern period, this intention has been realized to a higher degree, in my view, than in research on earlier or later periods.

These considerations have determined the configuration of the following paper. Firstly, I would like to discuss changing paradigms in the history of fertility over recent decades. Secondly, I will concentrate on the early modern period in order to show the results to which the combination of quantitative and qualitative approaches leads.

2. Changing Paradigms in the Historical Study of Fertility

2.1 The Theoretical Tradition: Transition Theory and Natural Fertility

Until well into the 1980s, the idea of using a perspective extending back into pre-modern times for the explanation of modern and contemporary patterns of fertility was virtually inconceivable. Until then, the predominant view among demographers and historians of fertility was a dichotomic perspective that contrasted "pre-modern" and "modern" societies. This dichotomy is manifested particularly clearly in two influential theories. The first is the Theory of Demographic Transition that attempts to interlink the secular declines of fertility and mortality with each other as well as with the global population growth that began in the 18th century, and to describe and explain them as part of a likewise global social modernization process. It thus connects statements on past, present and future demographic developments. Transition means the transition

from an ancient demographic regime to a modern system of population and society (Marschalck 1987, 15).

In recent decades, the theory has been intensively discussed, critiqued and modified. But in spite of all this criticism, it has retained its influence in demographic research as well as on global population policymaking, which is why it continues to be imperative to confront it. This paper argues that a critical distance to transition theory is needed to understand the significance of premodern reproductive behavior. Therefore, the following section starts with a brief look at its origins and contents.

The Theory of Demographic Transition is by no means a homogeneous, closed theoretical construction; rather, it is a corpus of ideas that has been developed since the 1920s by numerous French, British and American authors (Chesnai 1992, 1-9). It is "a set of generalizations about the decline in mortality and fertility that typically accompanies the modernization of a society" (Coale 1986: xix). The term itself was coined in 1945 at the leading demographic research institution in the USA, Princeton University's Office of Population Research, and this is also where the essential steps leading to its formulation as a general theory were taken (Notestein 1945, 41; Davis 1945). Its essential characteristics can be briefly described. According to the Theory of Demographic Transition, global population development proceeded in three phases. The first phase constituted a sort of "demographic state of nature" (Sokoll 2000, 90) that lasted until the commencement of the transition. Arduous living conditions in this longest period of human history manifested themselves in a high mortality rate, which, in turn – in order for a human population to merely maintain its existing numbers – is said to call for an equally high fertility rate. "Any society having to face the heavy mortality characteristic of the premodern era must have high fertility to survive." (Notestein 1945, 39). Accordingly, mortality and fertility were said to have achieved a state of near-equilibrium at a high level, which led to stagnation or very slow population growth.

The so-called demographic transition is seen as the second phase. The overall process of modernization, but, most of all, innovations in agriculture, industrialization and progress in the area of hygiene and medicine launched a long-term decline in mortality. Fertility, on the other hand, reacted more slowly to the modernization process; being embedded in religious doctrines, moral precepts, customs, family forms, etc., all of which aimed to achieve high fertility. It remained high despite decreasing mortality, which led to rapid, steep population growth. According to this analysis, a decline in birthrates set in gradually. Under the influence of urban and industrial ways of life and in connection with the rise of individualism, people liberated themselves from "older taboos" (ibid., 41) and developed new concepts of family size and number of offspring. This radical transition led to rational birth control through the use of contraceptive practices.

The result is said to have been adjustment of fertility to modern society's lower mortality rates and, accordingly, the end of high rates of population growth. A "new demographic balance" (Davis 1945, 5) characterizes the third phase of population development in the Theory of Demographic Transition. In Europe, North America and the West's other overseas outposts, this phase has already become a reality according to Notestein (1945, 40f.) in the middle of the 20th century. It is purported that this could also be achieved in the not-yet-industrialized parts of the world if their inhabitants implement thoroughgoing modernization in accordance with the Western pattern – in particular, industrialization, urbanization, higher living standards, systems of public education, and political participation (ibid., 52). In summary: The classic Theory of Demographic Transition perceives the pre-transition stage of mankind as a more or less homogeneous period of high fertility.

In the years following World War II, transition theory had an enormous influence on global development policies, as it made reducing fertility integral to the "modernization process" (Conelly 2008, 112). The central idea was to foster the economic and social development of so-called Third World countries, the long-term consequence of which would be, more or less automatically, a reduction of fertility. Demographic research in these countries – above all in East Asia and particularly in Japan – nevertheless showed a reduction of fertility even when this was not preceded by improvements of living standards. Due to these results, Notestein and his colleagues undertook a first fundamental modification of the theory in 1950. Whereas he previously "treated fertility rate as a dependent variable, reflecting a culture's social and economic development, now he suggested that reducing fertility might be a necessary condition for such development." (Conelly 2008, 138). This new variant became a basic precept of global population policy over subsequent decades. In demographic research, it engendered new interest in agrarian societies (past and present) with low fertility, and led to increasing weight being attributed to cultural factors for the explanation of fertility.[3] Surprisingly, the basic theoretical link between low fertility and modernization was not called into question but rather only stripped of its causality. Low fertility was either a result (the original version) or a precondition (the modification) of modernization. Despite the inherent arbitrariness, the theory retained the "force of generalization" (Kirk 1996, 365).

The second influential dichotomic theory is the theory of "natural fertility" developed in the 1950s by French demographer Louis Henry. His approach as

[3] Ever since, the significance of cultural factors is pointed out in all demographic examinations of the transition theory (see, for example, the results of Coale and Watkins 1986). However, those going about this define culture as one or more variables on the macro level and not as part of the agency of concrete individuals or families as is the case in the cultural demography approach. On this subject, see below.

well was to describe the development from pre-industrial Europe to the 20th century using the terms “natural” and “controlled fertility” (Henry 1961). He defined “natural fertility” as a type of behavior in which a married couple did not intentionally endeavor to limit its number of offspring. He defined “controlled fertility”, on the other hand, as the avoidance of additional births once a particular desired number of children had been reached (Coale 1986, 9). Nevertheless, in the field of historical demographics, the term “natural fertility” is often utilized in a more general sense to designate high and solely biologically limited marital fertility that is regarded as characteristic of pre-industrial and early industrialized societies. Only “the variance in age at first marriage” is said to have “led to different number of births per marriage” (according to the critical remarks in Schlumbohm 1992, 333). Beginning in the 1970s, this biologistic understanding of “natural fertility” was subjected to increasing criticism, which caused many demographers to eschew the term altogether. On the other hand, the very wide spectrum of marital fertility both with and without the use of intentional birth control was precisely what encouraged other – primarily British and American – demographers to retain the term “natural fertility” used in contradistinction to intentional birth control. According to this view, “natural fertility” is defined to include very much behavior-dependent but not intentional variations of fertility (Knodel 1986, 359).

Both the Theory of the Demographic Transition as well as the concept of natural fertility had positive effects on historical-demographic research, above all about Europe. They motivated scholars to conduct numerous empirical studies, mostly of a quantitative-statistical nature. The Theory of the Demographic Transition was closely connected with the Princeton project on European fertility decline (Coale and Waktins 1986). Thanks to this project, we have very detailed insights into the quantitative development of fertility throughout Europe (from the Atlantic to the Urals) from the mid-19th century to about 1960. Moreover, many of the participating demographers also investigated periods even further back in the past and taken a look at the 18th century at least (on the subject of Germany, see, above all, Knodel 1988). The theory of natural fertility has also supplied the motivation for a large number of – likewise quantitative – studies of demographic structures and developments from the 16th to the 19th century. The research group headed by Louis Henry called attention to the importance of church books for the field of historical demography, and developed methods of linking baptism, marriage and death records.

But it has been precisely their great success in inciting empirical research that ultimate led to both theories being increasingly called into question. Since the 1980s, both theories have been at the center of critical discussions. This criticism has to do with two areas. Firstly, a growing body of empirical evidence has been increasingly difficult to reconcile with these theories (Szreter 1993; Ehmer 2004, 118-127). Secondly, the theoretical framework and a quan-

titative-statistical empirical approach have proven to be unsuitable for the investigation of new issues related to people's modes of behavior and attitudes.

As to the first area: Of the many points of criticism, the most important has to do with the "intellectual construct of two stable states" before and after the "transition" (Gehrmann 2000, 164). With respect to the early modern period, the latest research findings have raised doubts about the purported balance between fertility and mortality, and generally about the assumption of a stable demographic structure. The population history of England – the European case on which the most comprehensive research has been done – exhibits violent fluctuations in fertility, mortality and population growth from the 16th to the 18th century. They lead to the conclusion

> that we must proceed under the assumption of shifting demographic conditions for the time prior to 1780 as well, which contradict the conventional conception of a more or less constant, 'naturally developing' as it were, initial demographic level prevailing in pre-industrial times (Gehrmann and Sokoll 2000, 187).

This implies criticism of "homeostatic" or "auto-regulative" pre-industrial population models, which have a long tradition, particularly in German population history (Fertig 2000; Schlumbohm 1996; Gehrmann 2000, 168f.). Apparently, a sustainable balance between mortality and fertility has not emerged in the post-transitional phase either; what occurred instead was a temporary rise in fertility during the so-called baby boom after World War II, followed by a renewed decline to a lower level in the "Second Demographic Transition."[4] The Theory of Natural Fertility – even when applied in an explicitly non-biologistic way – has been criticized as well. Besides the wide variation of fertility patterns, there is simply too much evidence of intentional birth control in premodern societies.[5]

2.2 New Cultural Historical Approaches

As an alternative to the traditional great narratives, new methodological approaches to explaining historical fertility trends and variations have been discussed in the field of international historical demography even since the 1980s. These approaches have been designated as "cultural demography" or "anthropological demography". In the field of history, the so-called "cultural turn" in the 1970s a led to a stronger influence of cultural history and historical anthropology as opposed to – or in combination with – social history and social science history.

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[4] See the papers on this subject in the third section of this special volume. Research on the postwar baby boom, one of the few examples of a completely unexpected and massive increase in birthrates during the 20th century, is, however, insufficient to date.

[5] For a critique, see the following paragraphs of this chapter, and the paper by Bertaux in this special issue.

These new approaches proceed from the assumption that fertility and its changes over time are the outcome of decisions made by individuals – single women and men as well as couples – and that these decisions are, in turn, based upon their respective cultural orientation and the degree of social latitude of their actions. These approaches constitute, in my view, a very promising complement or supplement to quantitative-statistical demography. They attempt to place the wish to have children and fertility behavior into a broad social and cultural context that includes such factors as concepts of masculinity and femininity, marital power structures, concepts of the life course, intergenerational relations and the like. They also make an intentional effort to put an end to fertility research's fixation on women and to address the influence of men and inter-gender relations on fertility behavior. Since these approaches have explicitly called into question the Theory of Demographic Transition, they emphasize the diversity of fertility regimes and especially of so-called "cultures of contraception" (Gillis, Tilly, and Levine 1992) in social, regional and cultural respects in pre-industrial as well as modern societies. The use of highly aggregated demographic indices is indispensable for the analysis of trends; on the other hand, it risks obscuring the diversity of fertility patterns.

In order to illustrate this development, I would like to set up an ideal-typical juxtaposition of two approaches to the European fertility decline based on two seminal and supremely influential books. The first one is Coale and Watkins (1986), which summarizes the results of the Princeton project that is a classic example of population studies and social science history. The second is Gillis, Tilly, and Levine (1992), which has been something like a flagship of new cultural approaches. What are the differences? I see them on six levels: (1) in the research interests; (2) in the understanding of historical change; (3) in the conceptualization of demographic behavior; (4) in the preference for particular historical sources and data; (5) in the range of analysis; (6) and finally in the methods and means of analysis. On each of these levels, the approaches are quite different. I would like to present these differences rather roughly in a wood-cut like style, but my intention is, of course, to take both of them seriously and not to caricature them (see below).

Research interests in classical population studies:
- understanding the process of the European (later on called first) fertility decline 1860-1960 as a whole; - building general explanatory models; - contributing to global political/economic progress.
Research interests in cultural history:
- understanding the complexity of human agency; - understanding individual and group meanings of demographic attitudes and practices; - understanding the meaning and evaluation of children and particularly of ones own offspring; - integrating sexual attitudes and practices into the explanatory framework.

Understanding of historical change in classical population studies:
- phase/step concept of historical development; - 3-step- model (traditional society-transition/revolution-modern society, as in the theory of the demographic transition).
Understanding of historical change in cultural history:
- critical versus teleological models; - questioning transition theory; - assumption of co-existence of diverse demographic patterns or "cultures of contraception" in all historical societies; - shifting of the weight of patterns within societies.
Conceptualization of demographic behaviour in classical population studies:
- demographic behaviour as an element of demographic, socio-economic and cultural structures (such as mortality patterns, labour force participation, education, etc.).
Conceptualization of demographic behaviour in cultural history:
- demographic behavior as part of individual and family strategies, kinship networks, gender roles/identities; - images of maternity and paternity; - marital power relations, networks of communication, life course expectations.
Historical sources/data in classical population studies:
- quantitative sources; - census data or census like listings on the national or provincial level; - sources which provide access to the effects of demographic practices of masses of people or of entire populations.
Historical sources/data in cultural history:
- qualitative sources; - letters, diaries, reports; - oral history interviews; - anthropological field research; - sources which provide access to the attitudes of individuals or small social groups.
Means of analysis in classical population studies:
- statistical; - strict research design, testing hypotheses, precise definition demographic indices and variables; - contextualisation of findings in limited/controlled universe of pre-defined variables.
Means of analysis in cultural history:
- hermeneutic; - free and explorative research design; - contextualisation of findings in an open universe.
Spatial and temporal range of analysis in classical population studies:
- pan-European and/or international; - comparisons across times and cultures; - particular emphasis on modern societies.
Spatial and temporal range of analysis in cultural history:
- case studies; - local, regional, social groups; - individual families - open to all historical periods.

So much for a brief look at these two paradigms. In the history of fertility, there was certainly no replacement of the social scientific paradigm by the cultural historical paradigm. Rather, there developed various forms of conflict, compe-

tition, and also peaceful coexistence, but not that much real cooperation in empirical research, so far. It will be one of the major tasks of future research to develop productive forms of cooperation.[6] In respect on the early modern period, as stated above, there seems to already be greater integration of quantitative demography, cultural history and historical anthropology. One of the reasons for this is presumably that early modern quantifying studies as well display a micro-historical dimension in that they are based on church books that record the births, marriages and deaths of individual people. The tension between particular case and generalization, between individual and group, is likewise present in these quantitative historical sources just as it is in most so-called qualitative sources.

3. The Myth of High Fertility in Pre-Industrial Societies

Classic theories of demographic development perceived the pre-transition stage of mankind – which covers almost the whole of world history to date – as a more or less homogeneous period of high fertility. The following section of this chapter argues that the assumption of high fertility before the Industrial Revolution of the 19th Century is questionable for various reasons. In Western, Northern and Central Europe, the regions for which the best data is available to us, fertility was rather low in pre-modern times. The number of surviving children per family was even considerably lower. My point in this digression into pre-modern times is to relativize the low fertility of the 20th century. In the past, living with few or no children was nothing out of the ordinary. This argument makes use mainly of quantitative evidence of historical-demographic studies on early modern Europe. I am relying on the results of many studies generated since the 1950s, and using the methods of family reconstitution – that is, linking up birth, marriage and burial registers in single parishes, which make it possible to construct vital histories of individuals and of their demographic behavior, and to aggregate individual and family data on the parish level (Flinn 1981, 1-12).

These studies show that the number of offspring per woman or couple is an extraordinarily variable magnitude that is influenced by a whole series of factors. First of all, we must keep in mind that although puberty and menopause constitute biological caesuras in the life course, they display very high variability throughout history and among different societies. The onset of puberty was relatively late in pre-industrial European societies; later in the lower classes than in the upper classes, later in Eastern Europe than in the West. This indicates that puberty is influenced by the state of economic development and especially by the standard of living. A girl from an urban laborer or rural peas-

[6] On this issue, also see the paper by Simon Szreter in this special issue.

ant family in the 16th or 17th century reached sexual maturity at approximately age 16-18, whereas the onset of puberty is at about age 12 in Western Europe today (Laslett 1971). As for menopause, the same process took place in the opposite direction, moving increasingly beyond age 40 over the course of history. Nevertheless, historical demography has demonstrated that the biological phase of fertility is of limited significance in European history. Social factors play the decisive role.

Firstly, there are rules and norms that link the right to engage in sexuality and reproduction with a particular social status, marital status and age. In Christian Europe during the medieval and early modern periods, marriage was deemed to be the sole legitimate setting for procreation. At the same time, matrimony was subject to certain conditions. In the early modern period in Western, Northern and Central Europe, there emerged a marital pattern that bound marriage to economic independence and the capability of establishing ones own household separate from that of ones parents. The consequence of this was a high age at first marriage – among brides, the average age was 25-27; the average groom was even a couple of years older. A considerable proportion of men and women – at times up to 20% – remained single and childless their whole lives. European Marriage Pattern was the designation given to this in historical demography. A contrasting pattern was to be found in many regions of Eastern and Southern Europe, where women married at a much younger age, usually under 20 (Flinn 1981, 27f.; Bardet/Dupâquier 1998, 490). Naturally, in pre-modern Europe, young people and young adults strove to engage in sexual relations. But, in doing so, they sought to avoid pregnancies, or, if a woman got pregnant nevertheless, they married before the baby's birth. In fact, in most regions of pre-industrial Europe, the rate of out-of-wedlock births was extraordinarily low.

Secondly, marital fertility also varied greatly. Even when the spouses continually cohabited and regularly had sexual relations, the intervals between births differed. While a mother breastfed her baby, she thereby considerably delayed conceiving again. Above all, however, many married couples did not constantly live together. The high degree of mobility in pre-modern Europe – first and foremost due to labor migration – resulted in many spouses being temporarily separated for longer or shorter periods. To this can be added the high level of mortality, which dissolved marriages due to the death of husbands or wifes. Even if remarriage was frequent (above all on the part of men), death meant the interruption of marital life. Finally, consideration must be given to the irregular and dramatically fluctuating food supply and the frequent epidemics. Crop failures led to famines, and people who are hungry, malnourished or sick have a diminished capacity or readiness to bear children (Flinn 1981, 24-46).

All of these factors led to high variability in marital fertility. In Germany, one extremely striking characteristic is the high regional variability. Marital

fertility in East Frisian villages was barely two-thirds the rate prevailing in Swabian and Bavarian communities. Indeed, there were also astounding differences in fertility within a single region or among neighboring villages (Knodel 1988, 372). The explanation of regional variability is not altogether clear. Extremes of very high or low fertility are usually explained with reference to the practice of breastfeeding, which delayed the onset of a woman's ability to conceive again after the previous birth, and can thereby considerably increase the interval between births (ibid., 251). Presumably, infants in Northern Germany were more often breastfed or nourished this way for a longer period than in the South. The parallel differences in infant mortality point to this interconnection, although scholarly knowledge about regional breastfeeding practices is still very sketchy. The task of explaining differences in fertility becomes even more difficult when we consider that they manifest themselves not only in polarized extremes but across an entire spectrum with fluid transitions.

Social differences in fertility are more difficult to register and summarize. The prevailing opinion tends toward the view that in the early modern period and even into the 19th century, social variability of fertility in Germany was low (Knodel 1988, 296). In other words, the major differences were among villages and regions, whereas within a particular village – even if it displayed considerable socioeconomic inequality – astoundingly uniform fertility behavior prevailed (Knodel 1986, 387). Nevertheless, studies of several villages suggest that marital fertility in the families that made up the peasant upper class was higher than in those of the lower social strata in rural areas. Indeed, this was most probably primarily the result of socially divergent marital age. Since men in the village's upper class generally married younger brides than did men who were members of the rural underclass, their wives gave birth to more children over the course of a marriage. In areas where higher marital fertility overlapped with a low age at first marriage, one, two or even three more children were born to upper-class families than to those of the underclass). Though caution is certainly still mandated here, one can nevertheless proceed from the general assumption that rural society in Germany displayed socially differentiated fertility and a "positive correlation between the number of offspring and wealth" (Gehrmann 2000, 237).

Is it possible, despite this great variability, to nevertheless generalize about the level of fertility in pre-modern Europe? In my opinion, several generalizations are possible. If the mean age at first marriage was around 25 and the mean age at birth of the last child was around 40, the reproductive span available to women was about 15 years. Since many marriages were terminated by death of the husband or wife before the end of the reproductive period, however, in practice the span was even lower. In 18th-century Lyon, for instance, the mean was about 12 years; in a couple of parishes in 18th-century Sweden, it was 15 years for peasant wives but only 12 years for the wives of landless agricultural laborers. Similar differences between the upper and lower classes of early

modern European societies can be found in many other regions as well. In addition, the birth intervals were surprisingly high, and they lengthened with increasing parity: something like 2 or 2½ years between the first and the second birth, up to 3½ years or even more for higher parities.[7] Therefore, for an average married woman, it was not possible to have more than 5 or 6 births, and where the age at first marriage rose to 28 or 29, at least one potential birth would be lost. Aggregated data for England in the period 1750-1779 give a Completed Fertility Rate (CFR) for married women of 5.0 (Hinde 2003, 225-226). In addition, one has to keep in mind that not all women married. Figures between 10 and 20 percent of never-marrying women were common in many early modern European regions, particularly in Central Europe. Again, there is some evidence that women of the landless rural population married later and less frequently than women of the peasant class.

A very important though often neglected point is the limited significance of fertility for reproduction in pre-modern societies. Of at least equal importance was the high infant and child mortality (Vögele 2007, 2010). Here as well, the regional and social differences were very great (as indicated above using the example of breastfeeding). If one were to nevertheless dare to make a bold generalization, then on average one might say that broadly one quarter of infants failed to survive the first year of life, and another quarter the next 9 to 14 years. The average marriage, therefore, would at best produce 2½ to 3 children that survived to adulthood. In pre-modern societies, the birthrate is a measure of fertility but certainly not of reproduction. About 30 years ago, Tony Wrigley estimated that 20 percent of all couples in pre-industrial Europe would have no surviving heirs, and another 20 percent only one (Wrigley 1978).

Such generalizations of the quantitative dimension of pre-modern European fertility are very rough, of course. Historical reality, in contrast, was dominated by differences, fluctuations and variations. Regional, local and social fertility levels were influenced by demographic conditions such as age at marriage and proportions never marrying, by illegitimacy, premarital conception and the like, and they were also influenced by external factors such as wars, famines, epidemics, various forms of occupation or labor migration and, last but not least, by whether or not breastfeeding was practiced. Nevertheless, if we take infant and child mortality into consideration, then we get a much different picture of pre-modern human reproduction than if we had restricted our focus to birth rates. Two to three surviving children per married couple, and a significant portion of the population who remained lifelong childless singles is a set of facts and circumstances that does not differ so very much from that which prevailed after the first fertility decline.

[7] Rising intervals for higher parities is also part of the ‘natural fertility’ model.

4. Deliberate Control of Reproduction

There are many quantitative and qualitative studies on the subject of early modern birth control in Europe. To an increasing extent, the two approaches are also comingled in the same study (Jütte 2003, 94-101). Initial evidence pointing to restriction of births was provided by quantitative studies, the results of which deviated from the expected model of "natural fertility" and this deviation was interpreted as an indicator of birth control being practiced. Most works on this subject deal with marital fertility control. Quantitative indicators of this are, first of all, long and parity-related (i.e. increasing with the number of children) intervals between births (cf. Gehrmann 2007, 99f.). Examples are to be found is such disparate social milieus as 18th-century Hungarian villages (Santow 1995, 28) and the City of Zürich from the 16th to the early 19th centuries (Pfister 1985). The frequently observed lengthening of the interval between births from the 16th to the 19th centuries is, accordingly, interpreted as due to proliferation of the practice of birth control.

An additional indicator is the age of women at last birth. In Zürich between 1580 and 1819, for example, this figure decreased from age 41.4 to 34.7 (Pfister 1985, 93). This is regarded as evidence of "stopping" – i.e. avoiding additional pregnancies after the birth of a specific number of children. Quantitative procedures enable scholars to show that members of certain social groups pursued the aim of limiting their number of offspring – for instance, the German aristocracy at least from the 18th century on (Schröter 2007). To sum up: It has been demonstrated by quantitative research that birth control was practiced by married couples in various social groups – for instance in France and England by the aristocracy and by segments of the urban bourgeoisie as well. But there were also rural regions and peasant societies that display clear evidence of a "one-child system," such as the above-mentioned villages in Southern Hungary in the 18th century.

Despite this concentration of research on the limitation of marital fertility, we cannot rule out that late marriage or dispensing with matrimony altogether was also motivated by the desire to have fewer children or none at all. After all, it is well known that abstaining from marriage as a means of birth control played a key role in the population theory of Malthus, for whom it constituted a "preventive check" to limit human fertility in contradistinction to the "positive check" of mortality catastrophes. In his 1798 "Essay on the Principle of Population," Malthus put forth numerous arguments as to why it would be advantageous for members of various social classes to forego marriage and offspring. For example: "The labourer who earns eighteen pence a day, and lives with some degree of comfort as a single man, will hesitate a little before he divides that pittance among four or five, which seems to be just sufficient for one" (Szreter and Garret 2000, 51). From this, Simon Szreter and Eidildh Garrett conclude that

> both to Malthus and to the popular culture, reproduction and the burden of too many children were matters of conscious consideration in late-eighteenth-century English society; fertility was well within the sphere of conscious calculation… (ibid.).

In their well-known seminal study of "The Population History of England: 1541-1871", Wrigley and Schofield (1981) established a connection between workers' salaries and age at first marriage: when pay increases, people married earlier; when it decreases, they married later. In this period, England was already a developed market economy in which people could have adjusted their marital behavior – and thus their number of offspring – to business cycle developments. But the limitation of marital fertility could have also followed this pattern. Data on Germany from about 1760 to 1850 suggest postponement of births during economic crises. Just such a pattern of behavior can be imputed above all to those married couples who had not (yet) lost any children (Gehrmann 2007, 96-99).

Such statistical results take on added weight as they are also supported to an increasing extent by the conclusions of cultural-historical research. There is a considerable body of writing on the limitation of family size and of the number of children from the 16th to the 19h centuries. Angus McLaren (1984) was one of the first historians to examine fertility in the pre-modern era from a comprehensive cultural-historical perspective. The discourses on birth control were diverse and conflicting. They included many voices attacking and condemning such practices (which, of course, can also be taken as testimony to how widespread they were). Christian sexual morals in particular held carnal relations not intended for procreation to be a sin. However, the discourses also included defenses of contraception. From this great abundance of contemporary statements, McLaren (1984, 62-64) derived four motivations for practicing birth control. One chief argument was that people engaged in sexual intercourse primarily for pleasure and not procreation. A second argument in favor of birth control was that it would spare the wife an endless series of pregnancies. A third argument was of a financial nature: the problem of providing a dowry for numerous daughters or, in society's lower strata, to even provide sufficient food and clothing for a large number of children. A fourth argument emphasized the numerous problems that children could cause: illnesses, accidents and the like, and the not inconsiderable risk of thanklessness and rebellion against their own parents.

Sparing women from having to undergo serial pregnancy seems to have been a prime consideration widespread far beyond pre-modern England in the discourses on birth control and the corresponding practices. There is evidence for the existence of taboos prohibiting sexual intercourse with a nursing mother – even if she breastfed her baby for several years – in numerous historical and contemporary cultures. They are said to be predicated on protecting both mother and infant (Santow 1995, 24-26). It was, first and foremost, women

themselves who could reduce the risk of getting pregnant again by extending the period in which they breastfed their baby. A contemporary account about the wife of a German pastor in the mid-18th century reported that because she

> dreaded frequent puerperium like the devil (though she had already spent considerable time in postpartum repose), it was her practice to breastfeed her children uncommonly long. Schack (her son, J.E.) was two years old and almost all of his 32 teeth had already come in, but he was still drinking mother's milk (Schlumbohm 1983, 24).

All these examples give abundant evidence of the use of deliberate birth control in the early modern period. Indeed, preventing pregnancy was even more important for single women than for married ones. The above-mentioned low rates of illegitimacy in most parts of Europe in the early modern period have been interpreted as evidence that contraceptive practices were being used. Adolescents and young adults – who, perhaps, did not marry until they were 30 or even older – did engage in premarital sex, and they knew about and used techniques to prevent pregnancy. However, low rates of illegitimacy were also the upshot of a form of "matchmaking" whereby a premarital pregnancy led to nuptials just prior to delivery. On the basis of his examination of English data from the 16th to the 18th centuries, Peter Laslett estimated that 20-60% of all conceptions were extramarital (Laslett 1980, 54-55). Pregnancies and births out of wedlock were viewed negatively in the early modern period and subjected to social sanctions. Single mothers were punished in various ways. Historical scholars have beheld the persecution of these women in numerous qualitative sources – primarily transcripts of legal proceedings held since the 16th century in which officials interrogated unmarried pregnant women or single mothers, actual or purported fathers, and witnesses. These sources reveal that people of all social classes were relatively well informed about the facts of life and about contraception – even if this enlightenment was also frequently mixed together with myths. This included comprehension of the workings of the menstrual cycle, coitus interruptus (withdrawal), etc.[8] It can be assumed that these insights gained in premarital carnal knowledge also had an impact later on marital sexual relations. Presumably, once they wedded, most couples dispensed with using such methods, but these were available if needed.

I am unable to go into great detail here about the birth control methods that were known and used in the early modern period. Suffice it to say that there were three main sets of practices: Firstly, knowledge of contraceptive methods was available, and there is a lot of empirical evidence that these methods were indeed utilized; secondly, if they failed, abortion was widely practiced; thirdly, turning children over to such institutions as foundling hospitals or practicing infanticide were means used to eliminate offspring or to keep their number low.

[8] For a wide range of examples from a remote rural Alpine region in 18th-century Austria, see Becker (1990).

Widespread methods of birth control included abstinence and coitus interruptus, but there were other means of contraception as well (Jütte 2003; Santow 1995). The condom came into use from the 16th century onwards (though they did not become widespread until the 19th century), first as a prophylactic device to prevent syphilis but increasingly as a means of contraception. Condoms were made of linen, sheep gut or the small intestines of other animals, leather and other materials. Other contraceptive devices included contraceptive sponges soaked in lemon juice, slices of lemon, beeswax or certain resins that a woman inserted into her vagina. However, since empirical evidence of such practices stems from local or regional studies, it is impossible to say how widespread knowledge of them actually was, and whether they belonged to specific "communication communities" and not to others. Certainly, none of these methods was 100% infallible. But even in the present day, the Pearl Index that measures the effectiveness of various means of contraception indicates great discrepancies between theoretical and practical effectiveness that result from, for instance, incorrect application. Even if most methods of birth control in the early modern period were not absolutely reliable, couples could at least succeed in lengthening birth intervals.

Several contraceptive substances made from plants were used to perform abortions, which were prohibited in early modern Europe (Leibrock-Plehn 1993). Nevertheless, there is a large body of medical literature discussing the abortifacient properties of certain plants, herbs, etc. In the 16th century, more and more such books were published in various European vernaculars and in ever-larger print runs. This could well have been connected to the legal prosecution of abortion, since these substances were officially classified as medicines permissible for the treatment of pathological amenorrhea or fetal death. Of the more than 100 such herbal remedies prescribed in 16th-century German medical sources, approximately a quarter have been confirmed as effective by modern science (Leibrock-Plehn 1993, 81). They were for sale in pharmacies; other dealers included quack healers, herbalists and midwives. Moreover, knowledge about abortion-inducing substances was passed on from older women to girls and disseminated in social networks. In addition to such plants, there were also certain physical movements or stresses that were said to induce discharge of the embryo, as well as magical means (such as the wearing of a snakeskin). In spite of these practices being outlawed, they were rarely exposed (Stukenbrock 1993). Often, men were the driving force behind an abortion in that they talked the woman they had gotten pregnant into aborting, obtained the abortion-inducing substance, or established contact with an abortionist.

In judicial proceedings, infanticide played a considerably more significant role since a pregnancy followed by the infant's disappearance was harder to conceal. Most of the defendants were single mothers who, either through neglect or some intentional act, allegedly killed their newborn babies. Married women, on the other hand, could avail themselves of the possibility of giving

birth to their unwanted child in normal fashion and then doing away with it over the following weeks through intentional endangerment or malnourishment. Such practices rarely came to trial since, in light of the high rate of infant mortality prevailing in any case, it was difficult to draw the line between an unintentional fatality and murder with knowledge aforethought, and premeditation could rarely be proved. Despite all the evidence, there is widespread agreement in the literature that infanticide was not a mass phenomenon in the early modern period in Europe; rather, it tended to be associated with particular social stresses and mental burdens placed on single mothers (Ulbricht 1990). In addition to legal prosecution, infanticide was religiously and socially stigmatized – although perpetrators and accessories used as an exculpatory pleading the religious argument that this was a means of conveying innocent children directly to Heaven (Schulte 1989; Ulbrich 1990, 92-207).

However, there was also a legitimate form of de-facto killing of children: the foundling hospitals that, beginning in the 15th century, were established in certain European cities such as Florence. A large number of such institutions were set up in the late 18th century, above all in large metropolises but increasingly in middle-size cities too. They made it possible for single mothers or married parents to give away their unwanted newborns, usually anonymously. The official purpose of foundling hospitals was to prevent infanticide. De facto, however, the rate of mortality among those placed in their care was extremely high – 80-90% of the infants admitted subsequently died – so that even 18th-century contemporaries referred to such facilities as "murder pits" (Ulbricht 1984, 214). The foundling hospital of a major city served, above all, single mothers in the surrounding region. For example, 41% of all children born in Vienna in 1856 ended up in a foundling hospital, where approximately 80% of them died.

One essential characteristic of birth control in early modern Europe was that it was practiced in the upper as well as the lower strata of the social hierarchy, though, indeed, for different reasons and with varying results. Let's look first at Europe's most privileged elites. Since the economically or politically dominant social groups were small and genealogically well documented, we have available to us a series of studies on both local and national levels about their biological reproduction and demographic development. S. Ryan Johansson (1987) summarized the most important of these studies from the period from about 1500-1900.[9] His major result is that there was a reproduction level below the replacement level both of families and whole local or national elite classes, which led to their more or less continuous contraction throughout the early modern period. If the elites remained numerically stable or even grew in num-

[9] Among the elite families or populations that he investigated were the British peerage, the Florentine and Venetian patriciate, the bourgeoisie of Geneva and Holland, and the ruling families of various European states. For the original sources, see Johansson (1987).

bers, than only by admitting new members to their ranks and integrating those who had climbed the social ladder. According to Johansson, the main motivation for low fertility in these social groups was status anxiety and the avoidance of downward mobility. This involved "a strong commitment among married couples to the preservation of the material basis of their own high social status and to the transmission of that status to their children" (Johansson 1987, 463). Their major means were, firstly, reducing marital fertility, and, secondly, restricting marriage of their surviving children to only one or two of them, while the others remained bachelors or spinsters, accepted church positions or entered monasteries. In Christian and particularly in Catholic Europe, lifelong celibacy was culturally esteemed.

On the other end of the social spectrum we find unmarried young women, most of them agricultural laborers or domestic servants, who were involved in short-lived or long-term pre-marital sexual relationships. If it was improbable or impossible that this sexual relationship would lead to marriage or if it was not even desirable, then they sought to avoid pregnancy or to terminate it via abortion. In the worst case, a newborn infant could be killed, set out to die of exposure, or turned over to a foundling hospital, which was virtually tantamount to a death sentence. The motives for doing so were the consequences of an extramarital pregnancy or birth for both the mothers and their children. Single mothers risked censure or fine by the legal authorities, and were frequently subjected to ridicule and discrimination by the local community. For female servants, getting pregnant or having a child out of wedlock meant loss of employment (and also, as a rule, loss of lodgings). Frequently, they were forced to leave the local area where they lived and worked, which also meant being torn out of their social network. Illegitimate children were subjected to social discrimination and had far fewer opportunities to make good in life than did children born to a married couple. They were much more at risk of infant and child mortality. In many European regions, they were prohibited from taking up crafts and trades (if these were organized in guilds), and were ineligible for citizenship of a city. Between these two poles was a broad spectrum of social positions in which forgoing children or restricting their number could have appeared advantageous and desirable.

In this paper I have been concentrating on early modern Europe. In this final section, however, I would also like to take a brief look at a non-European country, Japan. The population history of pre-industrial Japan long ago attracted the interest of historical demographers (both foreign and domestic), which led to intensive scholarly activity. Despite a few gaps in the research (Saito 1992), wide agreement nevertheless prevails as to the fundamentals of Japanese population history and to long term fertility trends. In the 17th century, the Japanese people was probably the "densest settled population in the world" (Macfarlane 1997, 34) and Edo (later named Tokyo), with approximately a million inhabitants in this period, is considered to have been the "largest city on earth" (ibid.,

22). In the 18th century, the early modern population growth seems to have ceased, and the population stagnated until the mid-19th century. In this period, Japan's defining characteristics were high urbanization, small families, and widespread birth control (Hanley and Yamamura 1977, 314). Despite displaying an age at marriage of women (around 20) that was low in comparison to Europe, the level of fertility was rather low, with a completed family size of 3 to 4 children ever born. Means of birth control included early stopping of fertility with last childbirth at 33-35, due to an end of intercourse of married couples. There is evidence that having late babies was regarded as improper, the link between sex and marriage as a cultural norm was weak, and (male) extramarital sex was not seen as sinful (Macfarlane 19997, 306-315). Moreover, birth-intervals were longer than in Europe, comprising typically three years between each child, due to long and universal breastfeeding. A further argument concerns the high work load of Japanese women in agriculture. As a rule, women worked continuously up to birth (and immediately after birth, as well) which often led to fetal losses (Saito 1981). Interestingly, there is no evidence of coitus interruptus or of contraceptives. Abortion, however, is said to have been widely practiced at least since the late 17th century (Hanley and Yamamura 1977), and there is also evidence that "infanticide was unusually prevalent in early modern Japan" (Macfarlane 1997, 333-350, here 347; Saito 1992). "All scholars agree that the Japanese resorted to abortion and infanticide as means of limiting the number of children within marriage…" (Hanley 1991, 698). The Japanese term for infanticide, mabiki, refers to thinning seedlings (Cornell 1996, 34). A widely-used practice was putting a sheet of paper over the mouth and nose of a newborn baby until it would stop breathing. As in other East Asian cultures, this practice was not regarded simply as an act of killing, but of sending back human beings waiting to be born to wait slightly longer until it is their turn once more. In religious cultures where Buddhism, Confucianism and Shinto were blurred, such practices are said not to have been stigmatized (Macfarlane 1997, 333-350). The Japanese example shows once more that deliberate control of fertility in preindustrial times appeared in various cultures and in many variations, and that it was certainly not limited to Europe.[10]

The general conclusion from all the quantitative and qualitative evidence of birth control before the so-called fertility decline is that having or not having a child was indeed a choice. When women (or men) decided to avoid pregnancy, birth, or rearing a child, they had good chances of finding options conducive to achieving their respective aim.

[10] In spite of the wide agreement among scholars, there is still an ongoing discussion about deliberate control of fertility by individuals through infanticide in early modern Japan, particularly in relation to high infant mortality due to other causes; for discussion see Cornell (1996).

Here, I would like to very briefly go into one last aspect. If, instead of reducing reproduction to biological reproduction, we consider it as social reproduction, we thereby bring up the question of whether parents' biological children grew up in the parents' home and, if so, how long. In the family system that prevailed in early modern Western and Central Europe, a widespread practice was to send away even very young children to other families to work – usually as servants – or, conversely, to take in other people's children. Comparable practices are still in use today in a totally different context in the form of so-called fosterage in rural areas of West Africa (Alber 2004). Explanations of fertility that concentrate exclusively on biological parenthood fall short of presenting a complete picture of many cultures.

5. Conclusion

What is, then, the benefit of a long historical perspective? Certainly, attitudes towards children and the motives for practicing birth control changed considerably during the transition to the Modern Age, and it is undoubtedly true that it is not until this Modern Age that we can properly speak of family planning. Nevertheless, living with very few children and reproduction on a low level that was hardly above the replacement rate were characteristic of many premodern societies too. Low levels of reproduction seem to be the rule in history rather than the exception. What I want to bring up for discussion in conjunction with this brief look at the early modern period is whether low fertility following the first and the second demographic transition is perhaps not as extraordinary as it generally appears. We could make an effort to consider the fertility of the recent past and the present not as the endpoint of a developmental process but rather as one of numerous historical variants, and thereby asses them in a way that is somewhat calmer, cooler and more objective.

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